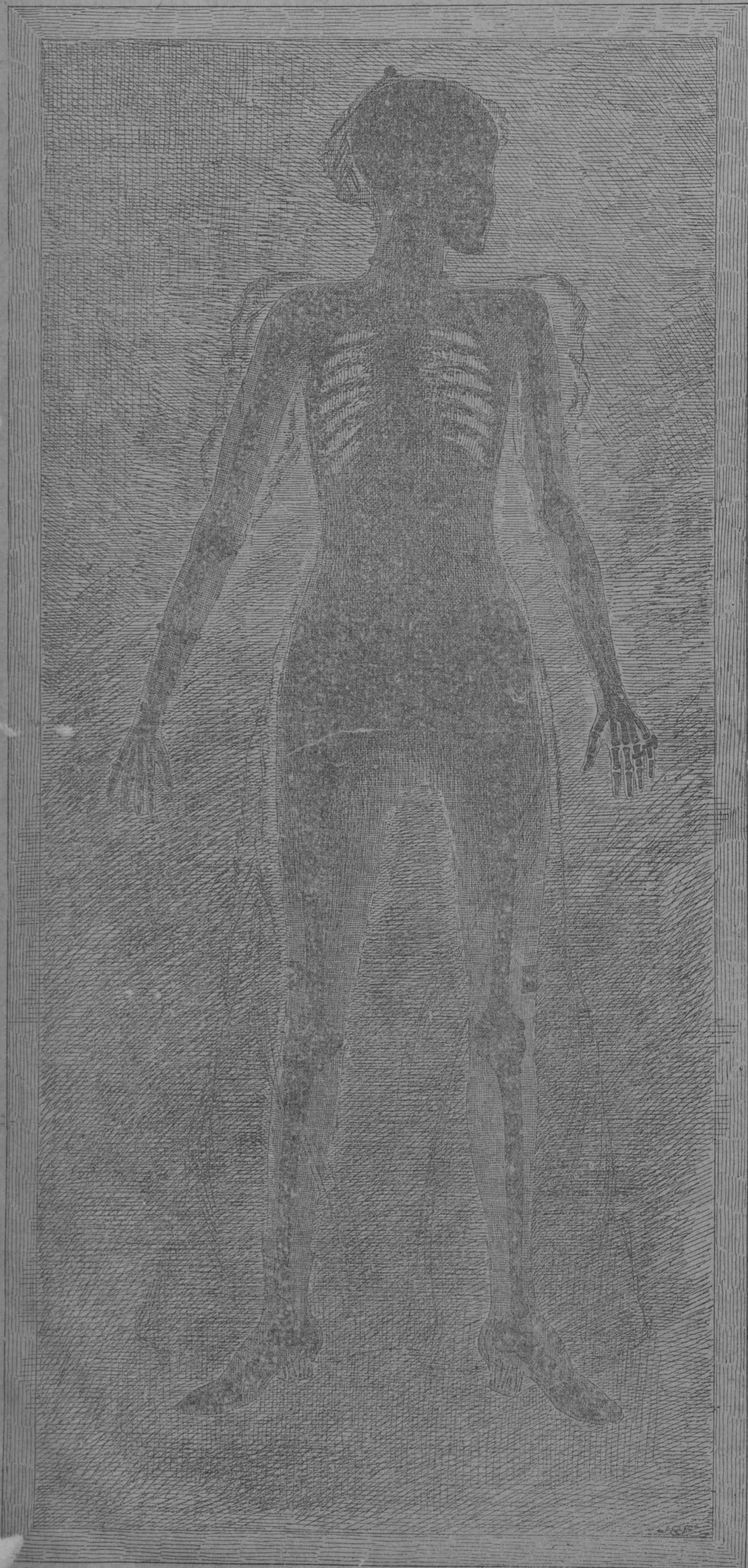


# A REAL X-RAY GIANTESS. THE GREATEST X-RAY YET.

Professor Morton, Who Made the Corset Experiments for the Sunday Journal, Has Simultaneously Made a Cathode Photograph of a Complete Human Being, a Seeming Miracle Which Up to Now Has Been Impossible.



From a photograph film five feet and a high, loaned to the Journal by Professor Morton.

## A Shadowgraph of an Entire Human Body Taken on a Continuous Film.

An X-ray shadowgraph of the entire human body has been taken at one exposure by Dr. William J. Morton, of this city. It is believed that this is the first time such a picture has been taken, either here or abroad.

Hitherto shadowgraphs of various parts of the body have been patched together so as to make a complete figure, but the result has not been entirely satisfactory. The taking of the new shadowgraph by Dr. Morton is a distinct advance in X-ray work. Shadowgraphs of this character will be of the greatest value to physicians in diagnosis and in the study of anatomy.

The subject of this picture was a woman thirty years of age, five feet four inches high, and weighing 120 pounds. She was well-muscled and in good health.

The picture was taken upon a continuous photographic film. This was six feet in length and three feet in width, and had been especially prepared. The film was placed on the floor wrapped in three sheets of black paper, and the body placed directly over it, so that the apparatus was beside the head and the Crookes tube directly over the pit of the stomach. When first making the attempt the doctor had tried using two and then three tubes, but the preliminary experiment developed two obstacles to this course. The first was that each tube occasioned independent pictures whose outlines did not coincide; the second was the utter impossibility of keeping two or more tubes going at the same time, so as to produce either in serials or in parallel any equal degree of work. When in parallel the current would quickly switch into one or the other in spite of the artificial heating or cooling; when in series the tube with the lowest vacuum limited the degree of current.

The development of the film was most tedious and difficult, and when the resulting negative was finally produced it showed that a longer exposure would have made a better one, particularly about the region of the hips. This region in all subjects is extremely difficult to portray under the best circumstances.

If the intensity of the X ray diminishes inversely as the square of the distance, it would take about twenty times as long to get a picture when the tube is four and a half feet from the sensitive plate as it would when one foot from it. On the other hand, it was necessary to place the tube four and a half feet away to prevent the distortion corresponding to the casting of long shadows.

This shadowgraph shows not only the bones and skeleton, but also the flesh and the texture of the clothes worn. The silk folds of the sleeves are mainly visible to the naked eye, as well as the folds of the skirt and its hem. The gold necklace about the neck, the bracelet on the arm and the finger rings on the hands may be noted. Some of the rings contained diamonds, in which cases the rings appear to be stoneless, as the diamond is a carbon and not opaque enough to be affected by the rays. The garter buckles appear clearly, the one on the right being more visible than the one on the left, which shows directly over the knee bone. The high-laced patent leather shoes show the eyelets and the nails in the heels.

The portions of the internal anatomy showing are the heart, liver and spleen. The subject during the time the picture was being taken did not experience any feeling from the effects of the rays whatsoever, and Dr. Morton maintains that there need be no injurious effects from the close contact with X-rays on the human person.

"The harmlessness of the X-rays," he said, "depends entirely upon the operator, and not on the apparatus. Anybody can take a hot iron and hold it close enough to burn the tissues, or hold it far enough away to be safe. I have personally never had a case where the tissues were burned."

The success attained in this experiment leads physicians to hope that Roentgen pictures of the entire adult skeleton, taken at one exposure, will soon become a part of the ordinary curriculum of X-ray work in our hospitals. They will be an important aid to diagnosis.

## WALKS ON THE WATER.

The problem of walking on the water has at last been solved. Professor William Cook, whose real name is William Glover, is just now walking over the rivers and ponds of Georgia almost as easily as if he were tramping about on dry land. He keeps his secret to himself, and all that one can discover is that he wears upon each foot what bears the appearance of a small boat of very peculiar construction, which enables him to glide over the surface of the water almost as rapidly as a skater can make his way over ice that is in good condition.

Professor Cook permits the public to see the tests of his remarkable invention and gives daily exhibitions in Columbus and Atlanta, Ga. Close inspection he avoids, however, and those who watch him are obliged to gain their ideas by long range methods and the aid of a field or opera glass. Observed with the assistance of the latter, the boat-like shoes which enable the inventor to travel about like a ship are three feet long and eight inches wide. On the sides and bottoms are fin-like projections, which close when the foot is moved forward, but open and present a large surface of resistance to the water when the other foot advances.

This is as far as the keenest observation goes. No one has been able to find out what the material is that is utilized for the shoes and the counterfeits. None can learn how they are manufactured, or the method by which the two are connected and operated. The facts are the secret of the inventor, who is more than reticent, and states that if any one learns the particulars of his plan, it will only be

after a great deal of trouble with him personally. He realizes, he says, the fact that a man who has invented something which is new should keep it to himself until he is legally protected. That is exactly what he proposes doing.

Several months ago Professor Cook went to America on a visit, taking his beloved water-walking apparatus with him, but he was deaf to all entreaty from various persons to permit them to gain a sight of his remarkable invention. Among the curious was his brother, but he fared no better than the rest and is as ignorant as he was at the beginning.

A Journal reporter who has closely observed the movements of this new marvel noticed that whenever Professor Cook took a step there seemed to be some peculiar agitation of his body. For this reason it is hinted that there is some sort of an apparatus which is used in connection with the shoes to bring about the general effect desired. In walking the professor does not lift his shoes from the water, rather shuffling along in the old familiar fashion known as "scuffling." At least if he does lift his feet, the action is not observable through a field glass. The general appearance of Professor Cook when he is engaged in this method of walking indicates continued and rather powerful effort.

## The Mystery of the Dead Man in the Davit.

Continued from Page Thirteen.

In the carpenter's shop, we threw in after him.

At this juncture some one thought of the mate. It was known that he had a loaded revolver, and it was not desirable that he should be at large with it. A careful search enabled a German sailor to find a bullet in his lung, fired from a crack in the fore-castle door, where the mate had evidently crawled after we left him. This taught the rest to be more careful. One man was sent aft to get another revolver and a couple of bottles of rum. Although I had no more love for the mate than any of the others, I could not bear the idea of hunting him with deadly weapons. I was too young.

There was a quantity of sulphur in the boatswain's locker that had been left over when the ship was fumigated for rats. We sat a lot of it afire in the galley—trusting to the cracks in the bulkhead—and gave him a smoke. I stationed myself on top of the house on one side, just above the door, with a running bowline, the hauling part leading abaft the house where the men were. Another man was similarly situated above the other door. I heard the mate moving uneasily, and before very long he jerked my door open and leaped out on deck, coughing and choking, but defiant, and looking quickly from side to side.

I deftly dropped my bowline over his head and sang out the one word, "Port!" The men who had hold of the port line ran aft, the ship-knot jammed below his shoulders, he was jerked from his feet and dragged along the deck, cursing and firing a futile volley, as long as his ammunition lasted.

We tied him to the stump of the mainmast, where we could conveniently kick him, and retired to the cabin for more refreshments. The weather being fine for a day or two, we enjoyed such luxuries as the cabin stores afforded. We took turns watching the mate to see that he was kept alive and securely tied. One day a man awoke, and for some unaccountable reason went on deck before proceeding to get drunk again. He discovered that, for the want of pumping, the bark was gradually settling in the water. He roused the rest of us and explained the necessity of pumping.

"What! Us pump? Never! There's the long boat."

After much wrangling and many drinks it was agreed that we should get her over, provision her and when necessary, leave in her.

It was a big job for men in our condition—heads aching, hands shaky and mouths parched with a thirst that nothing would quench. We got her over at last, provisioned her with two breakers of rum, one of water and a bag of biscuit.

That night it came on to blow, and the next morning, as there was every appearance of a heavy storm, we put the mast, sail and compass in the long boat, and considered what we should do with Skelly, who, from the long exposure, painful position and lack of food and drink, was already more dead than alive. A fierce quarrel at once arose.

Some having lost their intense hatred of the man proposed to take him along, bound.

The other faction swore that he should never leave the bark. One of the Englishmen attempted to cut him down, but a Portuguese stabbed the would-be liberator, and was in turn shot dead by a fellow countryman of the other. I interfered here, advising them that they were foolish to kill one another over such a man as Skelly, who had never shown the slightest humanity for any of us. It was finally arranged that he should be left right where he was. His hands were released and food and water placed within his reach. We then poured the dregs of a bottle of rum down his throat and gave him a lick over the head with the empty bottle by way of a parting salute.

We then added to the stores of the long boat such articles as we thought might be useful, and amid the half-articulate curses from the parched lips of the tyrant Skelly, we cut loose.

On the sixth day out, as the Welshman was trying to drink from the bung-hole of the water breaker, he reeled and dropped it overboard. Recriminations were soon followed by the dash of sheath knives, and I have a dim and hazy recollection of a fierce fight in the boat, in which I took no part.

When I did finally come to my senses it was to find myself, the sole survivor of the long boat, in the fore-castle of the Flying Scud, a big "Cape Horn" bound to Calicut for guano. I had been a week on board, and when I told some of my new shipmates a part of my story, they advised me to say nothing about it, as their captain and mates were "Hellions," and would not believe that I was innocent of any part of the proceedings on board the Black Hawk. So when I was called aft to report to the captain, I gave him a yarn that served as well for the official log.

Two years afterward, while in the Presidency Jail, at Calcutta, I heard that the Black Hawk had been boarded soon after we left her, and that the mate was found tied to the stump of the mainmast, dead, with the food alongside him.

FRED B. WILLIAMS,  
Author of "On Many Seas."

## THE QUEEN'S BIRTHDAY.

To-morrow She Will Celebrate the Seventy-eighth Year of Her Great Life.

If she lives until daybreak to-morrow morning, Her Majesty Queen Victoria of England, Empress of India, etc., will be seventy-eight years old. She will have reigned uninterruptedly for nearly sixty years—the longest reign recorded in English history.

Alexandrina Victoria, which is the Queen's full name, was born May 24, 1819, her mother being the Duchess of Kent and her father, the Duke, a fourth son of George III. of England. The Duke died when she was yet a child, and in consequence she became the heir presumptive to the British throne.

She was a bright child, full of fun and with a kind heart. She was educated as became her rank, but could never overcome a strong German accent in her English, despite the best of teachers.

When a girl of eighteen, the Princess Victoria was spending a few weeks at Kensington Palace, where she was born. Early in the morning of June 20, 1837, she was awakened by the arrival of the Archbishop of Canterbury and the Lord Chamberlain, who came to inform her that her uncle, George IV., was dead and that she was Queen of England.

Her Majesty, who was awakened from a sound slumber, appeared before the messengers, clad in her night gown, with slippers, and half hanging down her back. When told of her new honors, she asked the Archbishop to pray for her, and the trio went on their knees and prayed to their Creator.

That was the beginning of her reign. On the day of her coronation, which took place June 28 of the following year, she wore a crown valued at \$1,500,000 and weighing about two pounds. It contained nearly 3,000 precious stones, 2,500 being diamonds and the others rubies, sapphires and emeralds.

Victoria became extraordinarily popular. So much so, in fact, that a number of susceptible young men fell desperately in love with her, and several killed themselves for her sake. Even the great novelist, Charles Dickens, admitted in later years that once upon a time he had been smitten by his young Queen.

All this was ended, however, when she married Prince Albert, of Saxe-Coburg-Gotha, in 1840. Their happiness has often been told, but the following anecdote is not generally known:

One day the Queen and her liege lord had an ordinary, commonplace disagreement about something or other, and the Prince Consort, seeking to avoid further words, locked himself in his room. By and by there came a knock on the door.

"Who is it?" asked the Prince.

"It is I, the Queen," replied a voice from the outside. "I want to enter."

"I am very sorry, Your Majesty," answered the Prince, "but I cannot open the door, for I am not in a fit state to be seen by the Queen."

There was a silence of some minutes, and then came a small voice, half choked with tears:

"I want to come in."

"Who is it?" again asked the Prince.

"Your wife, Victoria," came the answer, and then the door was opened.

The Queen has been the contemporary of five sovereigns of Prussia, four each of Russia, Denmark, Spain and Portugal, three each of Sweden and Holland, and two each of Austria and Belgium. When she was crowned, Van Buren was President. Since then she has outlived Fillmore, Harrison, Taylor, Tyler, Polk, Pierce, Buchanan, Lincoln, Johnson, Grant, Hayes, Garfield and Arthur. The only President she ever met was Grant.

Up to a few years ago, she was very old-fashioned, and all her great correspondence was written with pen, but of late she has become addicted to the typewriter, and she, as well as Princess Beatrice, has become expert on the machine.

Music is one of the Queen's great pleasures, and many a famous composer has played before her. Hindostance is another of her hobbies, and she learned that intricate language when sixty-eight.

As a woman, Victoria has certainly been first in the hearts of her people. As a sovereign she has sometimes been assailed for political reasons, but friend and foe alike have given her the credit that was due her as an admirable woman.

## SNOW SIXTY FEET DEEP.

Sixty feet of snow is one attraction of New Mexico this Spring. This fact is reported by Special Agent Sherrard, of the Land Court. There is no record of a greater depth of snow than this.

There was an unusually heavy fall of snow in the valley of the upper Rio Grande and in the neighboring mountains during the past Winter. The snowfall is much the heaviest for many years past. In some of the deeper canyons the snow piled up to height of from forty to sixty feet, and many of the mountain roads are still impassable on account of the very deep snow, most of which still remains in the sheltered canyons and the northern slopes of the mountains.

It will be weeks yet before the great masses of snow are melted, and the Rio Grande, which is higher now than it has been for more than ten years at this season, will in all probability continue to rise for fully a month yet.

All of the streams in northern New Mexico are swollen beyond their usual bounds, and those which have their sources far up in the mountains will continue to rise for weeks. Work has been delayed in the mining camps on account of the deep snow, and it has been only in the past few days that work has been resumed in the northern part of the territory.

Further north it will be nearly three weeks yet before the mountain roads will be passable. Little damage has been done by high water up to this time, but fears are expressed that considerable loss will result in the valley of the Rio Grande, in the southern part of the territory, from overflows and damage to railroad property.